

CC -1- TISSUE SPECIFICITY: Expression levels are very low or not
 CC detectable on monocytes, T-cells, B-cells, dendritic cells and
 CC natural killer (NK) cells.
 CC -1- SIMILARITY: Contains 4 immunoglobulin-like C2-type domains.
 CC -----
 CC THIS SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).
 CC -----
 CC EMBL; AF025531; AAB87665.1; -;
 CC EMBL; BC017412; AAH17412.1; -;
 CC EMBL; BC027916; AAH27916.1; -;
 CC HSP; P43626; INKR.
 CC Genew; HGNC:6603; LILRA2.
 CC MIM; 604812; -;
 CC InterPro; IPR007110; Ig-like.
 CC InterPro; IPR003598; Ig_c2.
 CC Pfam; PF00047; ig; 3.
 CC SMART; SM00408; IgC2; 3.
 CC PROSITE; PS00835; IG_LIKE; 2.
 CC Immune response; Receptor; Repeat; Signal; Transmembrane;
 CC Immunoglobulin domain; Glycoprotein; Antigen; Alternative splicing;
 CC Polymorphism; Multigene family.
 CC SIGNAL 1 23 POTENTIAL.
 CC CHAIN 24 483 LEUCOCYTE IMMUNOGLOBULIN-LIKE RECEPTOR
 CC SUBFAMILY A MEMBER 2.
 CC EXTRACELLULAR (POTENTIAL).
 CC POTENTIAL.
 CC CYTOPLASMIC (POTENTIAL).
 CC IG-LIKE C2-TYPE 1.
 CC IG-LIKE C2-TYPE 2.
 CC IG-LIKE C2-TYPE 3.
 CC IG-LIKE C2-TYPE 4.
 CC BY SIMILARITY.
 CC DISULFID 49 97
 CC DISULFID 143 195
 CC DISULFID 244 295
 CC DISULFID 344 395
 CC CARBOHYD 64 64
 CC CARBOHYD 103 103
 CC CARBOHYD 138 138
 CC CARBOHYD 279 279
 CC CARBOHYD 300 300
 CC CARBOHYD 339 339
 CC CARBOHYD 429 429
 CC VARSPLIC 419 436
 CC
 CC VARIANT 25 25
 CC VARIANT 25 25
 CC
 CC SEQUENCE 483 AA; 52991 MW; 6B57FFC81F8CCF6C CRC64;
 CC
 CC Query Match 100.0%; Score 1868; DB 1; Length 483;
 CC Best Local Similarity 100.0%; Pred. No. 4.3e-142; Mismatches 0; Gaps 0;
 CC Matches 343; Conservative 0; Indels 0;
 CC
 CC QY 1 PRTHVQAGHLPKPTLWAEPSGVIIQGSFVTLRCQGSLOAEYHYLYRENKGSASVRRIQEP 60
 CC DB 17 PRTHVQAGHLPKPTLWAEPSGVIIQGSFVTLRCQGSLOAEYHYLYRENKGSASVRRIQEP 76
 CC QY 61 GKNGQPIPSITWEHAGRYHCQYSHNSSEYSDPLELVVTGAYSKPTLSALPSPVVTLG 120
 CC DB 77 GKNGQPIPSITWEHAGRYHCQYSHNSSEYSDPLELVVTGAYSKPTLSALPSPVVTLG 136
 CC QY 121 GNVTLQCVSVAFGFILCKEGEDHFORLNHSHARGSWAIFSVGVPSPSRWSYRCY 180
 CC DB 137 GNVTLQCVSVAFGFILCKEGEDHFORLNHSHARGSWAIFSVGVPSPSRWSYRCY 196
 CC QY 181 AYDSNSPYWMLPSDLLELLVPGVSKKPSLSVQPGPMVAFGESLTLQCVSDVGYDRFVLY 240

DB 197 AYDSNSPYWMLPSDLLELLVPGVSKKPSLSVQPGPMVAFGESLTLQCVSDVGYDRFVLY 256
 QY 241 KEGERDLPORPGWQPGAGLSQANFTLGPVSPHGGGYRCYSANHLSEWAPSPLDILI 300
 DB 257 KEGERDLPORPGWQPGAGLSQANFTLGPVSPHGGGYRCYSANHLSEWAPSPLDILI 316
 QY 301 TGQFYDRPSLSVQPVTPVAPGKNVTLCCQSRGQFHTFLTKEG 343
 DB 317 TGQFYDRPSLSVQPVTPVAPGKNVTLCCQSRGQFHTFLTKEG 359
 RESULT 2
 LIA3_HUMAN
 ID LIA3_HUMAN STANDARD; PRT; 439 AA.
 AC Q8N6C6; O15469; O15470; Q75016; Q8N151; Q8N154; Q8NHJ1; Q8NHJ2;
 AC Q8NHJ3; Q8NHJ4;
 DT 10-OCT-2003 (Rel. 42, Created)
 DT 10-OCT-2003 (Rel. 42, Last sequence update)
 DE Leukocyte immunoglobulin-like receptor subfamily A member 3 precursor
 DE (Leukocyte immunoglobulin-like receptor 4) (LIR-4) (Immunoglobulin-
 DE like transcript 6) (ILT-6) (Monocyte inhibitory receptor HM43/HM31)
 DE (CD8se antigen).
 GN LILRA3 OR LIR4 OR ILT6.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A., AND TISSUE SPECIFICITY.
 RC TISSUE=Lung, and Monocytes;
 RX MEDLINE=97422556; PubMed=9278324;
 RA Am J.P., Nwankwo C., Austen K.F.;
 RT "Molecular identification of a novel family of human Ig superfamily
 RT members that possess immunoreceptor tyrosine-based inhibition motifs
 RT and homology to the mouse gp49B1 inhibitory receptor.";
 RL J. Immunol. 159:2342-2349(1997).
 RN [2]
 RP SEQUENCE FROM N.A., AND TISSUE SPECIFICITY.
 RX MEDLINE=98208234; PubMed=9548455;
 RA Borges L., Hsu M.-L., Fanger N., Kubin M., Cosman D.;
 RT "A family of human lymphoid and myeloid Ig-like receptors, some of
 RT which bind to MHC class I molecules.";
 RL J. Immunol. 159:5192-5196(1997).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Peripheral blood leukocytes;
 RX MEDLINE=22388257; PubMed=12477932;
 RA Klausner R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buettow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.B.,
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Raba S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalon D.K., Muny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahy J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallos D.E.,
 RA Schnerch A., Schein J.B., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length
 RT human and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RN [4]
 RP SEQUENCE OF 1-420 FROM N.A., AND VARIANTS PRO-3; ARG-107 AND HIS-301.
 RA Norman P.J., Carey B.S., Vaughan R.W.;
 RT "Leukocyte receptor cluster: polymorphism and ethnic diversity of

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: September 9, 2004, 06:25:29 ; Search time 7.34126 Seconds
(without alignments)
2432.833 Million cell updates/sec

Title: US-10-771-418-10_COPY_17_359

Perfect score: 1868

Sequence: 1 PRTHVQAGHLPKETLWAEFG.....VTLLQSGQGFHTFLTKEG 343

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	1868	100.0	483	1 LIA2_HUMAN	Q8n149 homo sapien
2	1475	79.0	439	1 LIA3_HUMAN	Q8n6c8 homo sapien
3	1458	78.1	489	1 LIA1_HUMAN	Q75019 homo sapien
4	1457.5	78.0	598	1 LIB2_HUMAN	Q8n423 h leukocyte
5	1451	77.7	650	1 LIB1_HUMAN	Q8n16 h leukocyte
6	1192.5	63.8	631	1 LIB3_HUMAN	Q75022 homo sapien
7	1078	57.7	499	1 LIA4_HUMAN	P59901 homo sapien
8	1073	57.4	590	1 LIB5_HUMAN	Q75023 homo sapien
9	1071	57.3	643	1 LIB5_PANTR	Q8mj47 pan troglod
10	521	27.9	444	1 K3L1_HUMAN	P43629 h killer ce
11	512	27.4	387	1 K3S1_HUMAN	Q14943 homo sapien
12	499.5	26.7	488	1 LIB4_HUMAN	Q8nj16 homo sapien
13	492	26.3	455	1 K3L2_HUMAN	P43630 homo sapien
14	461	24.7	432	1 K3L1_MOUSE	P43630 homo sapien
15	454.5	24.3	335	1 G49B_MOUSE	P83555 mus musculu
16	445.5	23.8	422	1 K3L1_RAT	Q64281 mus musculu
17	403.5	21.6	303	1 G49A_MOUSE	P83556 rattus norv
18	387.5	20.7	304	1 K2S2_HUMAN	Q61450 mus musculu
19	385.5	20.6	304	1 K2S2_HUMAN	P43632 homo sapien
20	383.5	20.5	348	1 K2L1_HUMAN	P43631 homo sapien
21	382.5	20.5	341	1 K2L3_HUMAN	P43628 h killer ce
22	370.5	19.8	304	1 K2S1_HUMAN	Q14954 homo sapien
23	370.5	19.8	348	1 K2L2_HUMAN	P43627 homo sapien
24	365	19.5	377	1 K2L4_HUMAN	Q99706 homo sapien
25	359.5	19.2	304	1 K2S3_HUMAN	Q14952 homo sapien
26	358.5	19.2	304	1 K2S5_HUMAN	Q14953 homo sapien
27	307.5	16.5	485	1 FCAR_HUMAN	P24071 homo sapien
28	243.5	13.0	495	1 A1BG_HUMAN	P04217 homo sapien
29	216.5	11.6	231	1 DM43_DIDMR	P82957 didelphis m
30	178	9.5	3707	1 PGBW_MOUSE	Q05793 mus musculu
31	155.5	8.3	4391	1 PGBM_HUMAN	P98160 homo sapien
32	154.5	8.3	847	1 CD22_HUMAN	P20273 homo sapien
33	149.5	8.0	526	1 CEAL_HUMAN	P13688 homo sapien

34	149.5	8.0	862	1	CD22_MOUSE	P35329 mus musculu
35	146.5	7.8	702	1	CEA5_HUMAN	P06731 homo sapien
36	145.5	7.8	1709	1	SN_HUMAN	Q9bzz2 homo sapien
37	143	7.7	1694	1	SN_MOUSE	Q62230 mus musculu
38	127.5	6.8	646	1	MU18_HUMAN	P43121 homo sapien
39	124	6.6	3375	1	UN52_CAEEL	Q6561 caenorhabdi
40	121	6.5	738	1	PEC1_HUMAN	P16284 homo sapien
41	120.5	6.5	972	1	KFMS_HUMAN	P07333 homo sapien
42	120.5	6.5	1447	1	DCC_MOUSE	P70211 mus musculu
43	119	6.4	740	1	PEC1_PIG	Q95242 sus scrofa
44	115.5	6.2	739	1	VCA1_RAT	P29534 rattus norv
45	115.5	6.2	1010	1	CONT_CHICK	P14781 gallus gall

ALIGNMENTS

RESULT 1
LIA2_HUMAN
ID LIA2_HUMAN STANDARD; PRT; 483 AA.
AC Q8N149; O75020;
DT 10-OCT-2003 (Rel. 42, Created)
DT 10-OCT-2003 (Rel. 42, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Leukocyte immunoglobulin-like receptor subfamily A member 2 precursor
DE (leucocyte immunoglobulin-like receptor 7) (LIR-7) (Immunoglobulin-
DE like transcript 1) (ILT-1) (CD85h antigen).
GN LILRA2 OR LIR7 OR ILT1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Primates; Catarrhini; Hominiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORM 1), AND TISSUE SPECIFICITY.
RC TISSUE=Peripheral blood leukocytes;
RX MEDLINE=98208234; PubMed=9548455;
RA Borges L., Hsu M.-L., Fanger N., Rubin M., Cosman D.,
RT "A family of human lymphoid and myeloid Ig-like receptors, some of
RL J. Immunol. 159:5192-5196(1997).
RN [2]
RP SEQUENCE FROM N.A. (ISOFORM 2).
RC TISSUE=Lung, and Pancreas;
RX MEDLINE=22388257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Shenmen C.M., Schuler G.D.,
RA Klausner R.D., Collins F.S., Wagner L., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Haieh F.,
RA Hopkins R.F., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Sodergren E.J., Lu X., Gibbs R.A.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Udell T.B., Toehiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McSwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalón J., Muny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalls D.E.,
RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length
RL human and mouse cDNA sequences";
CC Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC -!- FUNCTION: May act as receptor for class I MHC antigens.
CC -!- SUBCELLULAR LOCATION: Type I membrane protein.
CC -!- ALTERNATIVE PRODUCTS:
CC Event-Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=Q8N149-1; Sequence=Displayed;
CC Name=2;
CC IsoId=Q8N149-2; Sequence=VSP_008455;
CC Note=No experimental confirmation available;